OIPE
SEP 28 2007
PATENT & TRADEMARK OFFICE

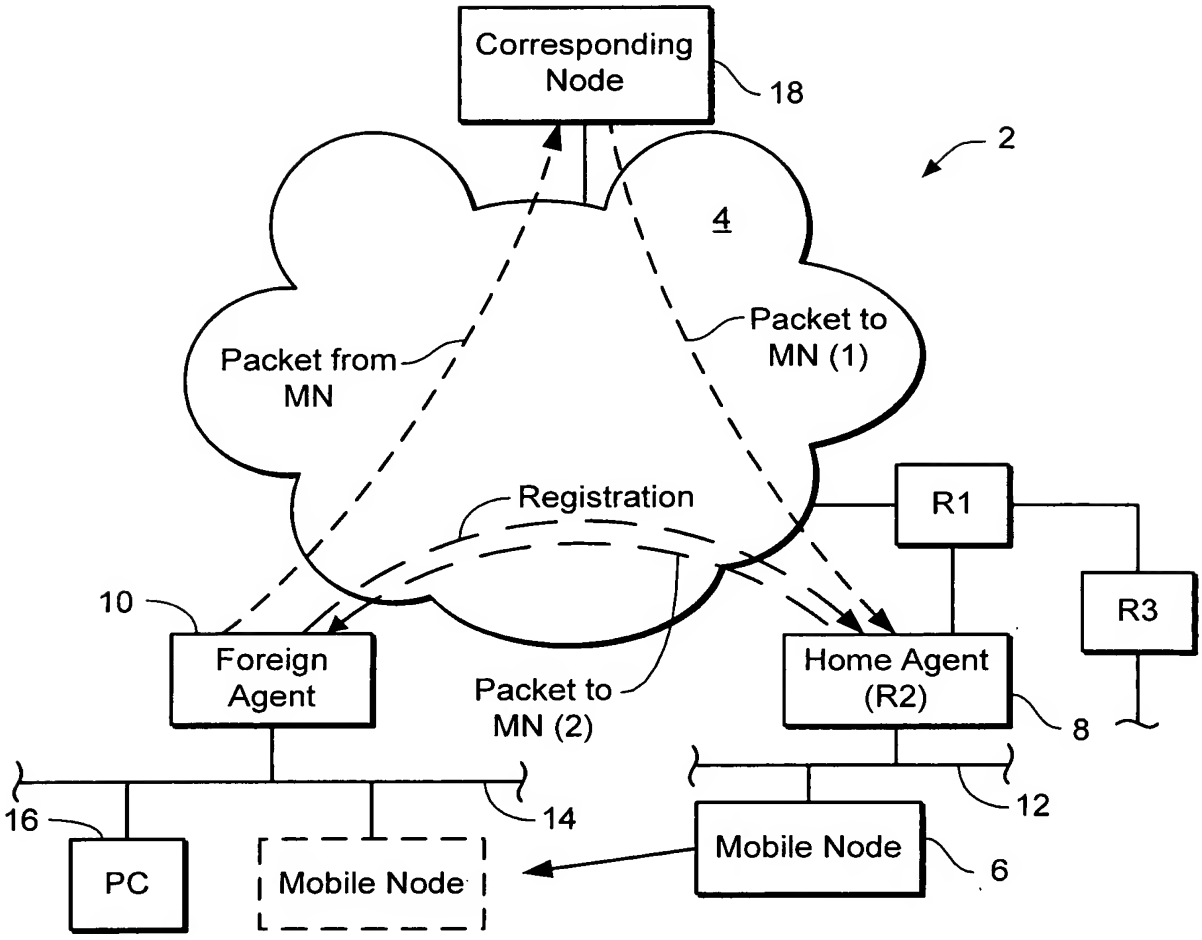

FIG._1

Prior Art

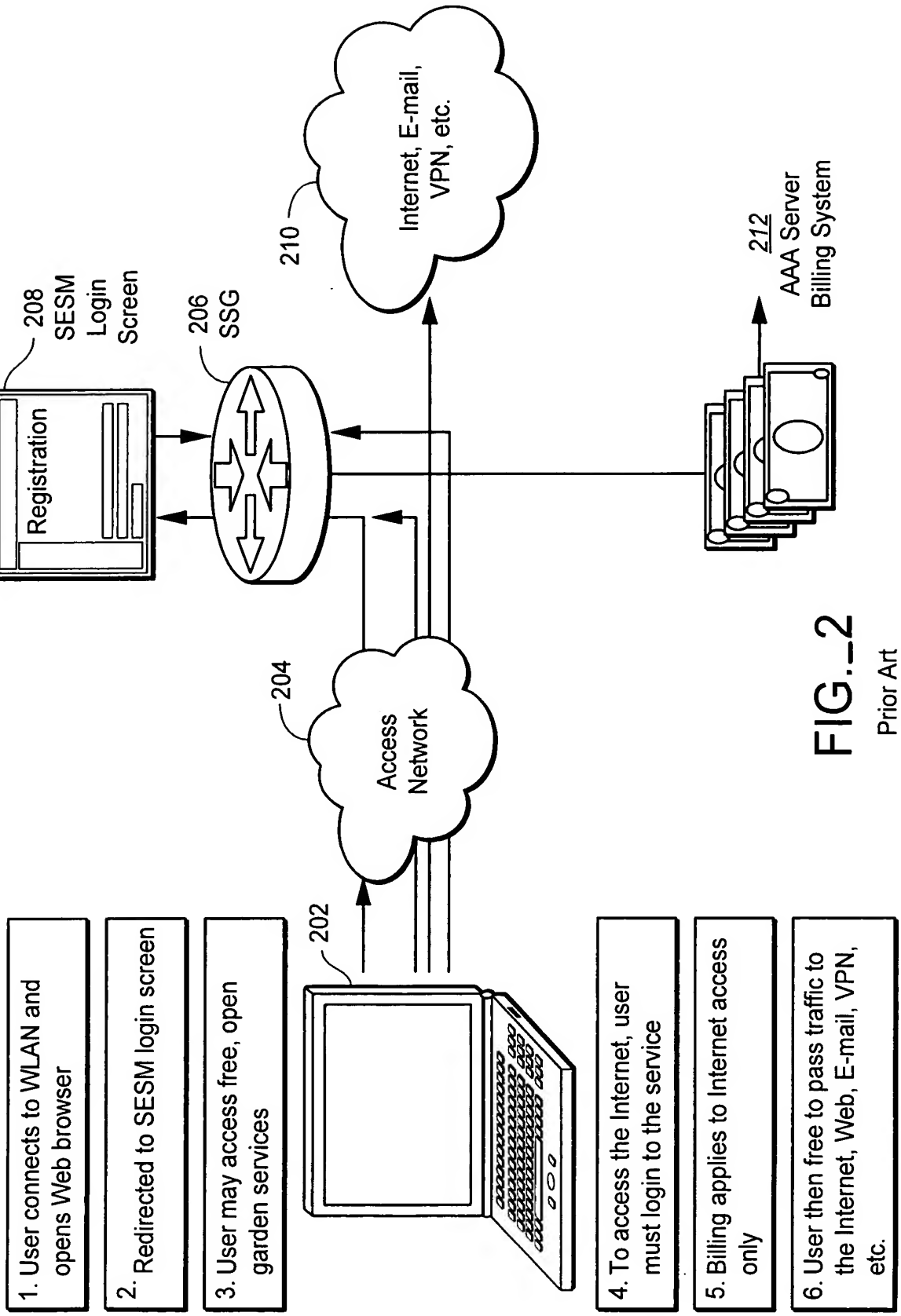

FIG._2

Prior Art

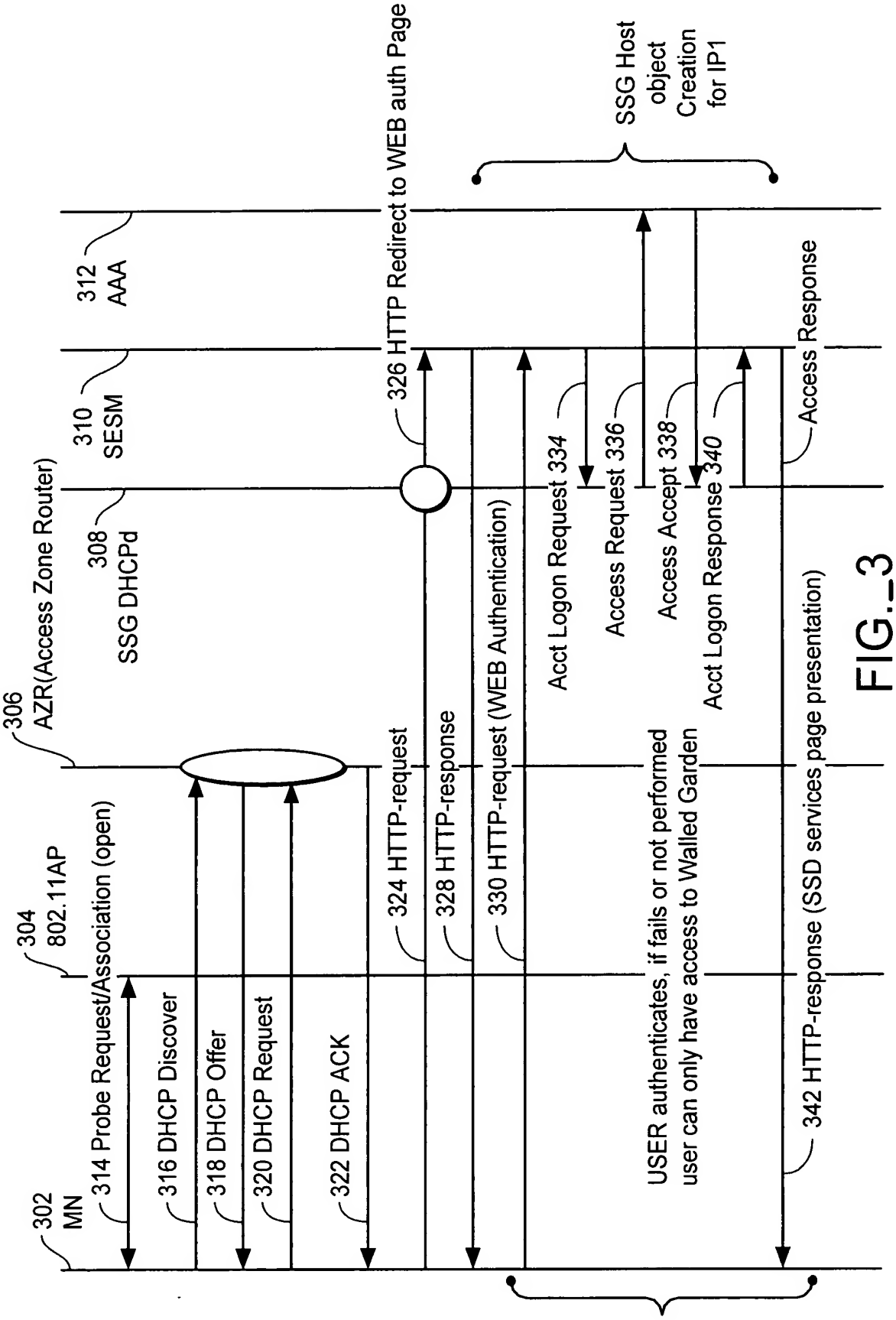

FIG._3

Prior Art

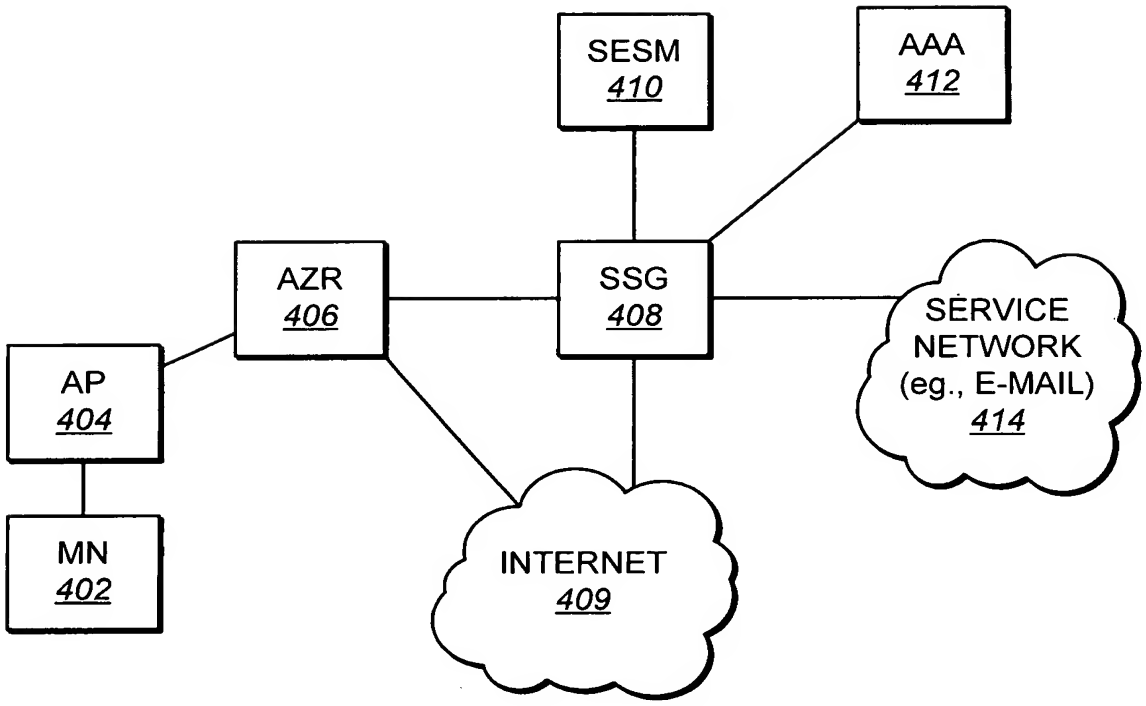
SESM
410
AAA
412
AZR
406
SSG
408
SERVICE
NETWORK
(eg., E-MAIL)
414
AP
404
MN
402
INTERNET
409

FIG._4

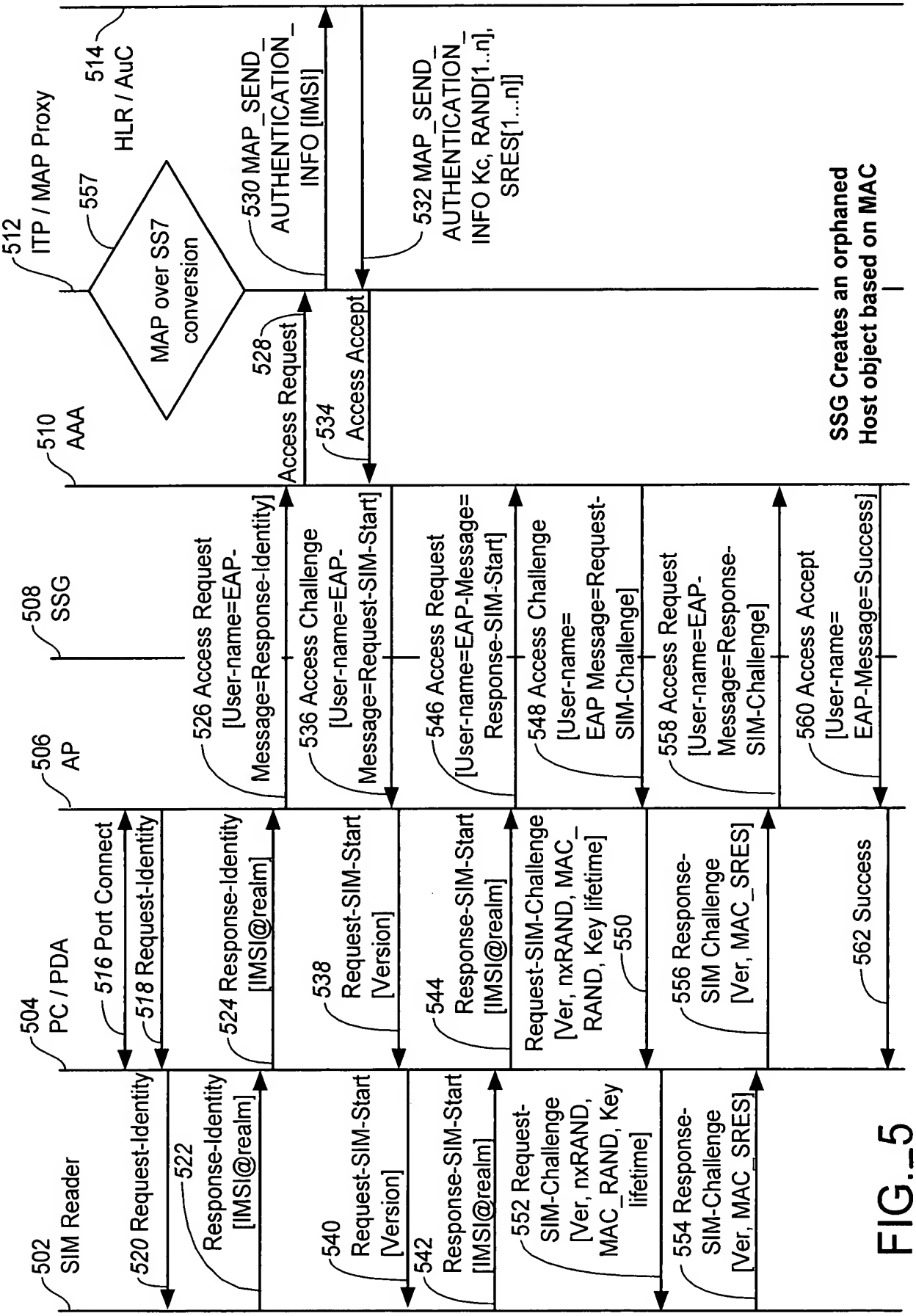
502 SIM Reader
504 PC / PDA
506 AP
508 SSG
510 AAA
512 ITP / MAP Proxy
514 HLR / AuC
557
MAP over SS7 conversion
520 Request-Identity
516 Port Connect
518 Request-Identity
522 Response-Identity [IMSI@realm]
524 Response-Identity [IMSI@realm]
526 Access Request [User-name=EAP-Message=Response-Identity]
528 Access Request
530 MAP_SEND_AUTHENTICATION_INFO [IMSI]
532 MAP_SEND_AUTHENTICATION_INFO Kc, RAND[1..n], SRES[1...n]]
534 Access Accept
536 Access Challenge [User-name=EAP-Message=Request-SIM-Start]
538 Request-SIM-Start [Version]
540 Request-SIM-Start [Version]
542 Response-SIM-Start [IMSI@realm]
544 Response-SIM-Start [IMSI@realm]
546 Access Request [User-name=EAP-Message= Response-SIM-Start]
548 Access Challenge [User-name= EAP Message=Request-SIM-Challenge]
550 Request-SIM-Challenge [Ver, nxRAND, MAC_RAND, Key lifetime]
552 Request-SIM-Challenge [Ver, nxRAND, MAC_RAND, Key lifetime]
554 Response-SIM-Challenge [Ver, MAC_SRES]
556 Response-SIM Challenge [Ver, MAC_SRES]
558 Access Request [User-name=EAP-Message=Response-SIM-Challenge]
560 Access Accept [User-name= EAP-Message=Success]
562 Success
SSG Creates an orphaned Host object based on MAC

FIG._5

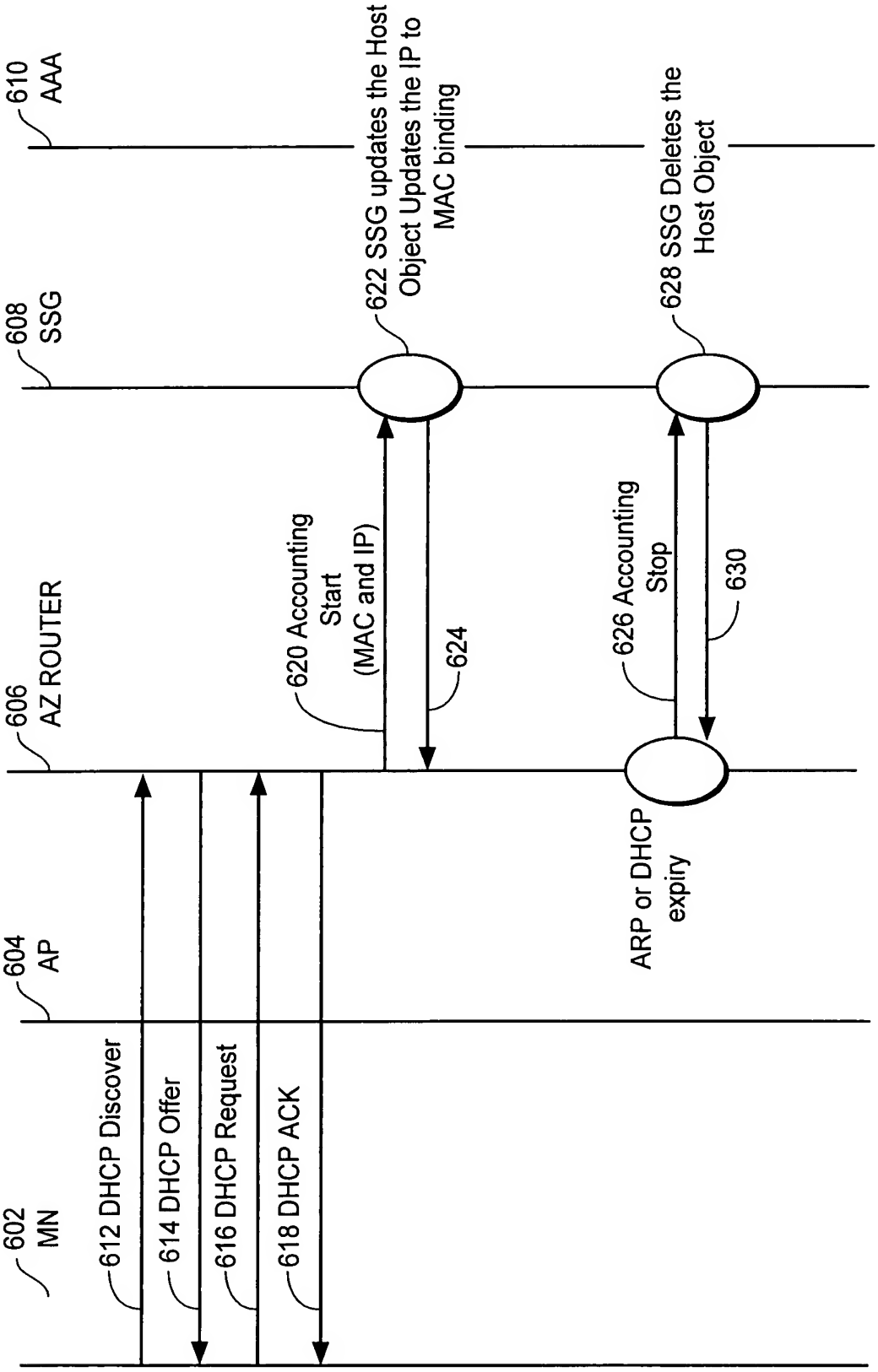
610
AAA
608
SSG
606
AZ ROUTER
604
AP
602
MN
612 DHCP Discover
614 DHCP Offer
616 DHCP Request
618 DHCP ACK
620 Accounting Start (MAC and IP)
622 SSG updates the Host Object Updates the IP to MAC binding
624
626 Accounting Stop
628 SSG Deletes the Host Object
630
ARP or DHCP expiry

FIG._6

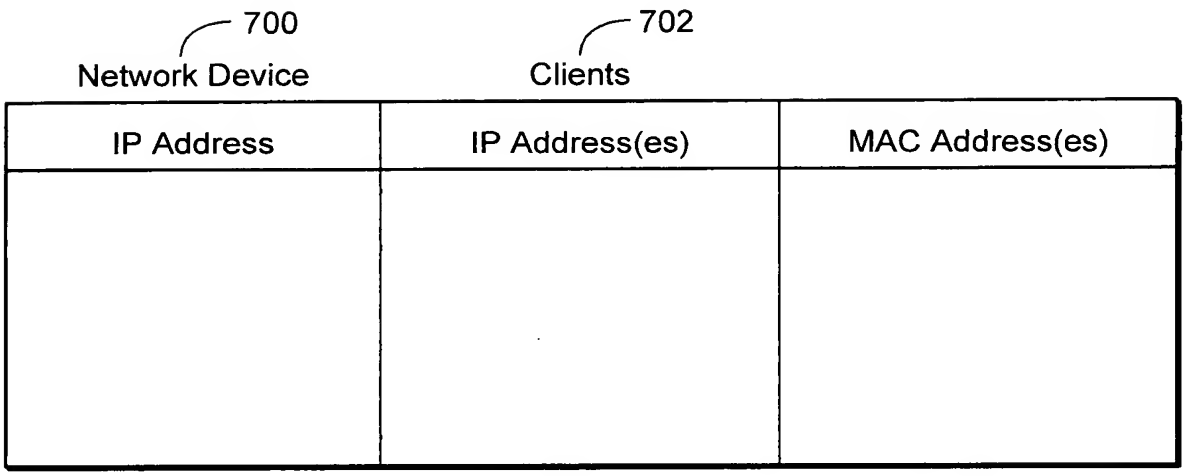
700
Network Device
702
Clients
IP Address
IP Address(es)
MAC Address(es)

FIG._7

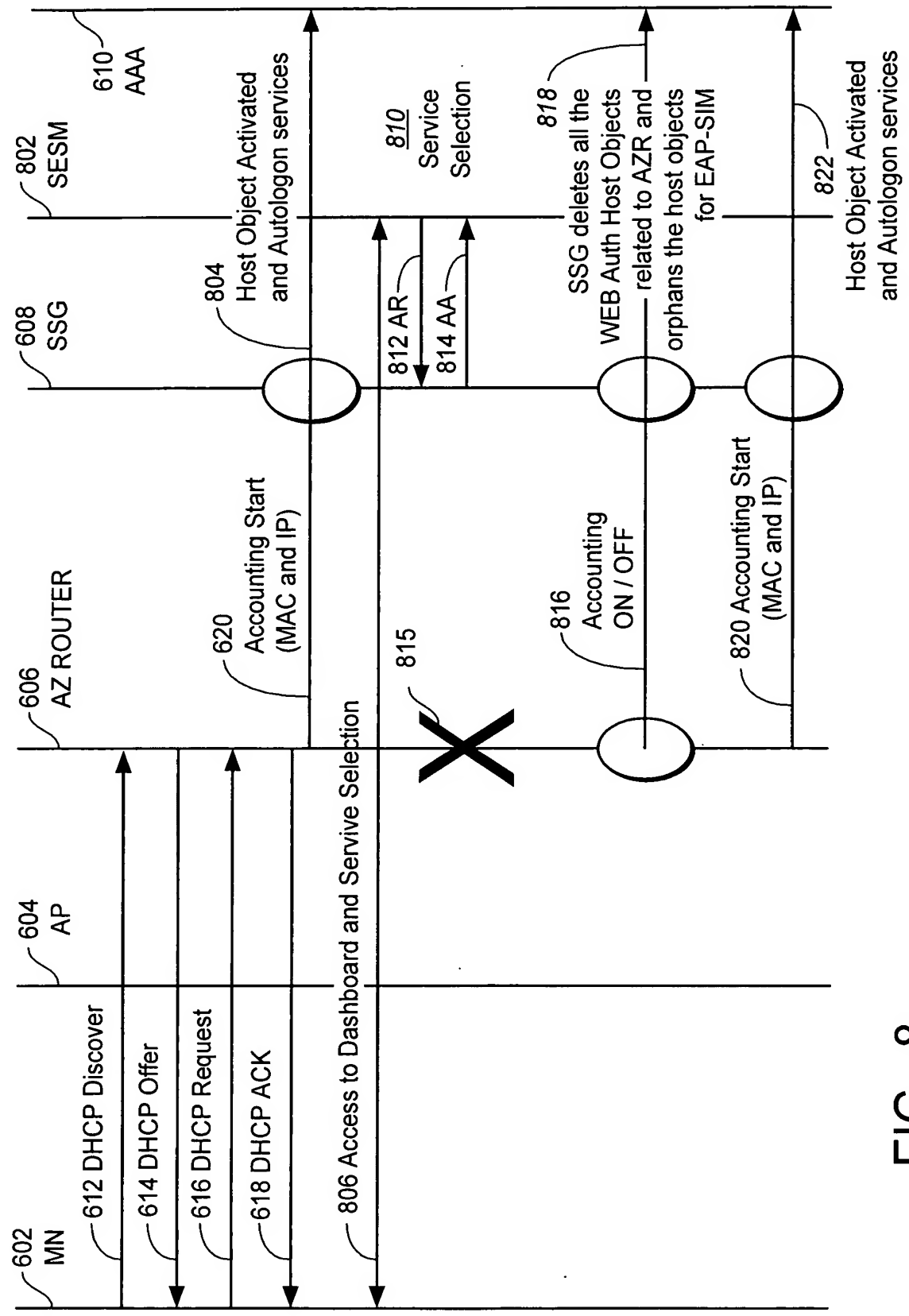
602 MN
604 AP
606 AZ ROUTER
608 SSG
802 SESM
610 AAA
612 DHCP Discover
614 DHCP Offer
616 DHCP Request
618 DHCP ACK
806 Access to Dashboard and Servive Selection
620 Accounting Start (MAC and IP)
804 Host Object Activated and Autologon services
812 AR
814 AA
815
810 Service Selection
816 Accounting ON / OFF
818 SSG deletes all the WEB Auth Host Objects related to AZR and orphans the host objects for EAP-SIM
820 Accounting Start (MAC and IP)
822 Host Object Activated and Autologon services

FIG._8

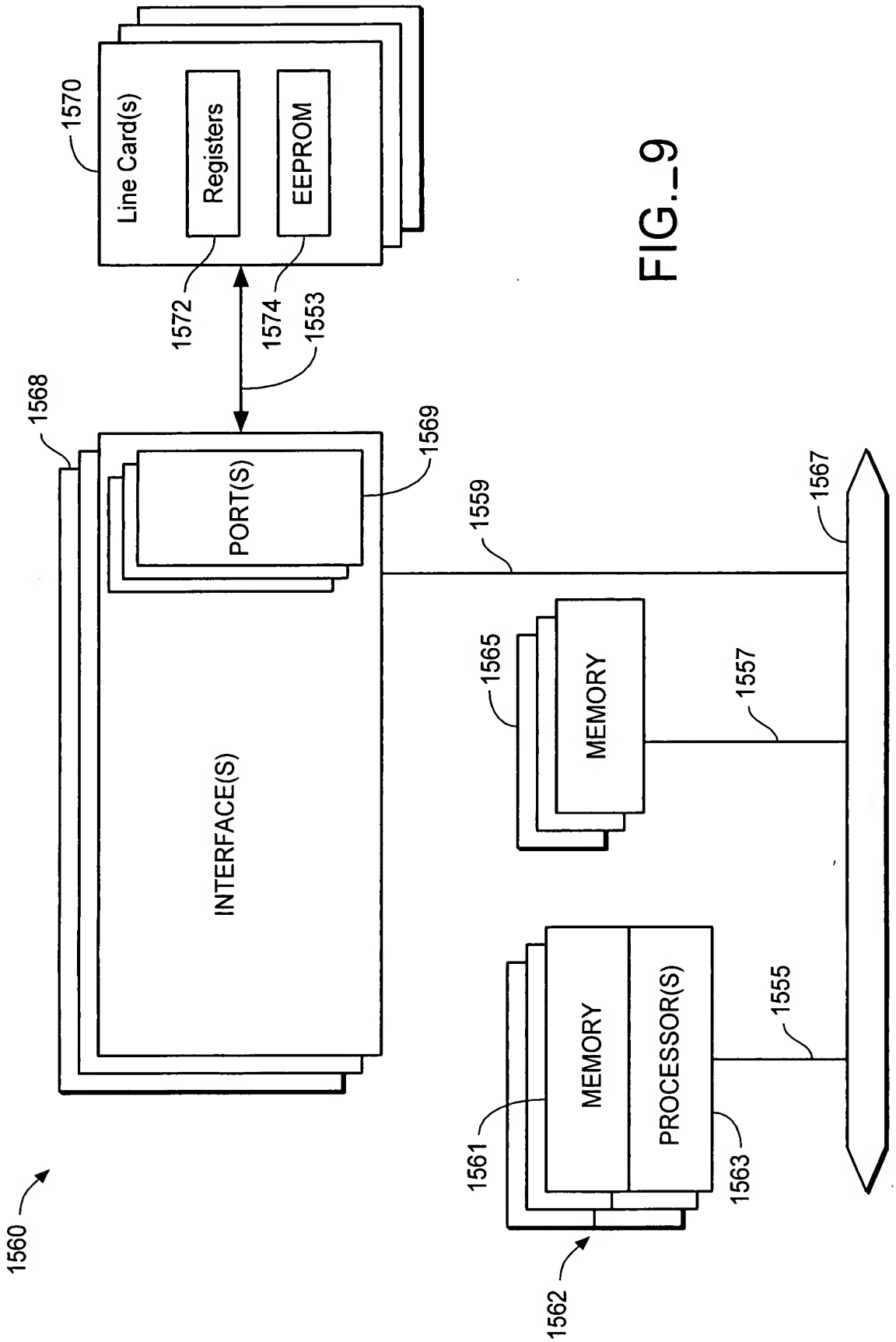
1570
Line Card(s)
Registers
EEPROM
1572
1574
1553
1568
1569
PORT(S)
INTERFACE(S)
1559
1567
1565
MEMORY
1557
1561
MEMORY
PROCESSOR(S)
1555
1563
1562
1560

FIG._9